



## United States Global Change Research Program

Data and Information Working Group  
Subcommittee on Global Change Research

# References Cited in the Foundation Report of the National Assessment of the Potential Consequences of Climate Variability and Change

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## **The U.S. Global Change Research Program**

The U.S. Global Change Research Program was initiated in 1989 as a high-priority effort to address key uncertainties about changes in the Earth system, both natural and human-induced; monitor, understand, and predict global change; and provide a sound scientific basis for national and international decisionmaking on global change issues. Congress codified the USGCRP in the Global Change Research Act of 1990, in order to provide for:

...development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change.

...increasing the overall effectiveness and productivity of Federal global change research efforts.

Since its inception, the USGCRP has been directed toward strengthening research on key scientific issues. The Program has supported research that has led to substantial increases in knowledge, improved predictive understanding, and documented evidence of global environmental change, including major scientific advances in the understanding of stratospheric ozone depletion, the El Niño-Southern Oscillation phenomenon, global climate change, tropical deforestation, and other issues.

The interagency Subcommittee on Global Change Research provides overall direction and executive oversight of the USGCRP. Within this framework, agencies manage and coordinate Federally supported scientific research on global change.

### **Subcommittee on Global Change Research Participating Agencies and Executive Offices**

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Department of Commerce

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Department of Defense

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National Institutes of Health

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National Assessment of the Potential Consequences  
of Climate Variability and Change**

**Data and Information Working Group  
United States Global Change Research Program  
Subcommittee on Global Change Research  
July 2001**

## Foreword

In 1997 the U.S. Global Change Research Program (USGCRP) initiated the National Assessment of the Potential Consequences of Climate Variability and Change to provide greater depth of understanding about the significance of climate variability and change for the United States. In 1998, the USGCRP established the National Assessment Synthesis Team as a Federal advisory committee of experts drawn from governments, universities, industry, and nongovernmental organizations, and charged this group with preparing a national-level report that would summarize current understanding of the national-level implications of climate change and variability.

In addition, the USGCRP initiated new analysis and assessment activities focused on the potential consequences for various regions of the country and for socioeconomic sectors of particular national importance. To ensure that the analysis and synthesis of information would address the most important issues in ways that would be most helpful to those needing the information, the regional and sectoral activities were designed to ensure close interaction with stakeholders with a direct interest in the potential consequences of climate variability and change. Each regional assessment was based at a university in the region under study and the sectoral studies were co-chaired by scientists in the relevant fields at universities and leading government research laboratories.

The report of the National Assessment Synthesis Team, *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, was submitted to the Subcommittee on Global Change Research in October 2000, and was forwarded to the President and Congress in November. The report is available to the public on the Web ([www.nacc.usgcrp.gov](http://www.nacc.usgcrp.gov)) and has, since its release, been published by Cambridge University Press in two parts—an *Overview* volume and a more detailed *Foundation* volume. The Foundation volume contains extensive citations of the published literature upon which conclusions drawn in both the National Assessment Overview and Foundation volumes are based. The references collectively indicate the broad scope of issues addressed in the National Assessment and identify published sources that the several hundred participants in the assessment activities, from all over the United States, judged to be significant and most relevant.

This present publication makes these references available in a comprehensive, consolidated, and systematic form organized by subject. It was prepared by the USGCRP interagency Data and Information Working Group (DIWG) as part of its overall objective of meeting the need of users for high-quality data and information that can be readily located, accessed, and used. Such DIWG activities have continued uninterrupted since the inception of the USGCRP and over a period of major changes in research, technology, and policy, as well as a very great increase in the volume of global change data and information. (For examples of other DIWG activities see the DIWG Web site, [www.globalchange.gov](http://www.globalchange.gov), where this present publication is also available.)

The DIWG is currently made up of representatives from the Departments of Agriculture, Commerce, Defense, Energy, and the Interior, and the Environmental Protection Agency, the National Aeronautics and Space Administration, and the National Science Foundation. The National Academy of Sciences Committee on Geophysical and Environmental Data also participates actively. The chair of the DIWG is elected by its members.

It is expected that the references cited in this report will form a basis for follow-on studies, as well as for a wide range of other uses by educators, decisionmakers, researchers, and the public in enhancing understanding of the relationship between human activities and the changing environment. To help users find the published literature in which they are most interested, the citations have been grouped into subject categories. These categories are listed below, with representative topics that each includes, and are the same as those used for the DIWG's annual USGCRP publication of citations for the newly available global change related agency data sets. Within each category, the literature citations have been sorted by Foundation report chapter to help make clear the context in which the cited publications were used. The categories are:

Agriculture - Crops, Forestry, Livestock, Plants, Soils

Atmosphere - Aerosols, Atmospheric chemistry, Climate, Clouds, Weather

Biosphere - Ecology, Vegetation, Wetlands, Zoology

Carbon - Atmospheric carbon, Ocean carbon, Sequestration, Soil carbon

Cryosphere - Glaciers, Ice, Snow

Geology - Earthquakes, Earth's structure, Gravity, Magnetic fields, Nonrenewable resources, Volcanoes

Human Dimensions - Economic effects, Environmental effects, Human health

Hydrosphere - Groundwater, Precipitation, Surface water, Water quality

Land Surface - Erosion, Land cover, Land type, Land use, Topography

Oceans - Coastal processes, Circulation, Resources, Temperature, Waves

Historical Climate - Historical records, Ice, land, and ocean cores

Solar Physics - Energetic particles, Solar activity, Solar radiation

We hope you find this publication informative and useful. For further information, contact the Data and Information Working Group (Wanda R. Ferrell, Tel. 301-903-0043; or Les Meredith, Tel. 301-286-8830, e-mail [les@usra.edu](mailto:les@usra.edu)) or the USGCRP Office (Tel. 202-488-8630, e-mail [office@usgcrp.gov](mailto:office@usgcrp.gov)).

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Chair, Data and Information Working Group**

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## **Research Sectors of the Report**

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# **Atmosphere**

## **Scenarios Used for the Report**

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